What is claimed is:

1. A three-dimensional image displaying apparatus comprising:

a front display unit having at least one transparent display screen, the at least one transparent display screen including a plurality of organic electroluminescent elements;

a rear display unit located behind the front display unit and having a display screen; and

a spacer connected between the front display unit and the rear display unit.

2. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer prevents transmission of gas.

3. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer is a cylindrical member.

4. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer is a transparent plate member.

5. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer has an anti-reflection characteristic.

6. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer includes a mechanism for adjusting a width of the spacer to adjust a distance between the front display unit and the rear display unit.

7. The three-dimensional image displaying apparatus

according to claim 1, wherein the front display unit includes a first organic functional layer and the rear display unit includes a second organic functional layer.

8. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer is hermetically connected between the front display unit and the rear display unit.

9. The three-dimensional image displaying apparatus according to claim 7, wherein the spacer has a hollow space and at least one of the first and second organic functional layers is located in the hollow space of the spacer.

10. The three-dimensional image displaying apparatus according to claim 9, wherein at least one of the first and second organic layers is covered with a sealing device.

11. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer is a solid member.

12. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer includes a plurality of poles.

13. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer has a coating that restrains reflection.

14. The three-dimensional image displaying apparatus according to claim 1, wherein the spacer is a hollow member filled with an inert gas.

15. A method of making a three-dimensional image displaying apparatus, comprising:

providing a front display unit;

providing a rear display unit; and

connecting the front display unit with the rear display unit by a spacer such that a display screen of the front display unit is parallel to a display screen of the rear display unit.

16. The method according to claim 15, wherein the step of providing the front display unit includes providing an organic electroluminescent display screen made from a plurality of organic electroluminescent elements.

17. The method according to claim 16, wherein the front display unit has at least one transparent display screen, and the rear display unit is located behind the front display unit.

18. The method according to claim 17, wherein the organic electroluminescent display screen includes an organic functional layer which has a light emitting layer, and the light emitting layer emits light upon application of a current.

19. The method according to claim 18, wherein the front display unit is hermetically connected with the rear display unit by the spacer.

20. The method according to claim 19 further including locating the organic functional layer in a hermetic confinement defined by the front display unit, spacer and rear display unit.